

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1 1 (Currently Amended). An inkjet device comprising:
2 an inkjet head having multiple nozzles arranged at equally spaced
3 intervals in a row, the inkjet head ejecting ink droplets from the multiple
4 nozzles onto target pixels on a medium;
5 a conveying unit that conveys the medium in a first direction
6 relative to the inkjet head, wherein a plurality of lines are defined on the
7 medium, each of the plurality of lines extending in a second direction that
8 is orthogonal to the first direction;
9 a data generating unit that generates both ejection data and timing
10 control data from pattern data, the ejection data being generated for each of
11 specific lines selected from the plurality of lines based on predetermined
12 criteria, the timing control data being generated for each of the plurality of
13 lines;
14 a drive-waveform-generation-signal generating unit that generates a
15 drive-waveform generation signal in accordance with the timing control
16 data;
17 a transfer-signal generating unit that generates a transfer signal in
18 accordance with the timing control data;
19 a drive-waveform generating unit that generates a drive waveform
20 in accordance with the drive-waveform generation signal;
21 an ejection-data transferring unit that transfers the ejection data in
22 accordance with the transfer signal; and
23 a control unit that controls, based on the drive waveform and the
24 ejection data transferred from the ejection-data transferring unit, the inkjet
25 head to selectively eject ink droplets from the multiple nozzles.

1 2 (Currently Amended). The inkjet device according to claim 1, further
2 comprising a ~~conveying~~ conveying unit that conveys the medium in a first

3 direction relative to the inkjet head, wherein:
4 a plurality of lines are defined on the medium, each of the plurality
5 of lines extending in a second direction that is orthogonal to the first
6 direction;
7 the plurality of lines has an interval in the first direction that is
8 smaller than a minimum ejection frequency of each of the multiple
9 nozzles; and
10 the timing control data are defined for each of the plurality of lines,
11 and include drive-waveform generation timing data, which determine
12 whether to generate the drive waveform for the each of the plurality of
13 lines, and ejection-data transfer timing data, which determine whether to
14 transfer the ejection data for each of the plurality of lines.

1 3 (Currently Amended). ~~The An~~ inkjet device ~~according to claim 1~~, further
2 is comprising:

3 an inkjet head having multiple nozzles arranged at equally spaced
4 intervals in a row, the inkjet head ejecting ink droplets from the multiple
5 nozzles onto target pixels on a medium;

6 a data generating unit that generates both ejection data and timing
7 control data from pattern data;

8 a drive-waveform-generation-signal generating unit that generates a
9 drive-waveform generation signal in accordance with the timing control
10 data;

11 a transfer-signal generating unit that generates a transfer signal in
12 accordance with the timing control data;

13 a drive-waveform generating unit that generates a drive waveform
14 in accordance with the drive-waveform generation signal;

15 an ejection-data transferring unit that transfers the ejection data in
16 accordance with the transfer signal;

17 a control unit that controls, based on the drive waveform and the
18 ejection data transferred from the ejection-data transferring unit, the inkjet
19 head to selectively eject ink droplets from the multiple nozzles; and

20 a conveying unit that conveys the medium in a first direction
21 relative to the inkjet head, wherein:
22 a plurality of lines are defined on the medium, each of the plurality
23 of lines extending in a second direction that is orthogonal to the first
24 direction;
25 the plurality of lines has an interval in the first direction that is
26 smaller than a minimum ejection frequency of each of the multiple
27 nozzles;
28 the timing control data are defined for each of the plurality of lines;
29 the drive-waveform generating unit generates the drive waveform
30 only at lines which include at least one of the target pixels; and
31 the ejection-data transferring unit transfers the ejection data only at
32 lines which include at least one of the target pixels and at which the ink
33 droplets are ejected based on ejection data different from previously
34 transferred ejection data.

1 4 (Original). The inkjet device according to claim 1, further comprising a
2 data-rotation-instructing-signal generating unit that generates a
3 data-rotation instructing signal in accordance with the timing control data,
4 wherein the control unit includes an ejection shift register that stores
5 ejection data, at least one storage shift register that stores ejection data, and
6 a data rotating unit that rotates the ejection data between the ejection shift
7 register and the at least one storage shift register in accordance with the
8 data-rotation instructing signal.

1 5 (Original). The inkjet device according to claim 4, wherein the control
2 unit controls the inkjet head based on the ejection data stored in the
3 ejection shift register.

1 6 (Currently Amended). A control method for controlling an inkjet device,
2 the control method comprising the steps of:
3 a) conveying a medium in a first direction relative to an inkjet

4 head, wherein a plurality of lines are defined on the medium, each of the
5 plurality of lines extending in a second direction that is orthogonal to the
6 first direction;

7 b) generating ejection data and timing control data from pattern
8 data, the ejection data being generated for each of specific lines selected
9 from the plurality of lines based on predetermined criteria, the timing
10 control data being generated for each of the plurality of lines;

11 b c) generating a drive-waveform generation signal in accordance
12 with the timing control data;

13 c d) generating a transfer signal in accordance with the timing
14 control data;

15 d e) transferring the ejection data to a register in accordance with
16 the transfer signal;

17 e f) generating a drive waveform in accordance with the
18 drive-waveform generation signal, and

19 f g) controlling, based on the drive waveform generated in step d)
20 and the ejection data stored in the register, an inkjet head to selectively
21 eject ink droplets from multiple nozzles of the inkjet head onto target
22 pixels on a medium.

1 7 (Original). The control method according to claim 6, wherein the timing
2 control data are defined for each of a plurality of lines defined on the
3 medium, and include drive-waveform generation timing data and
4 ejection-data transfer timing data, the drive-waveform generation timing
5 data determining whether to generate the drive waveform for the each of
6 the plurality of lines, the ejection-data transfer timing data determining
7 whether to transfer the ejection data for each of the plurality of lines, each
8 of the plurality of lines extending in a first direction that is orthogonal to a
9 second direction in which the medium is conveyed relative to the inkjet
10 head, the plurality of lines having an interval in the second direction that is
11 smaller than a minimum ejection frequency of each of the multiple
12 nozzles.

1 8 (Currently Amended). ~~The A~~ control method ~~according to claim 6~~ for
2 controlling an inkjet device, the control method comprising the steps of:

3 a) generating ejection data and timing control data from pattern
4 data;

5 b) generating a drive-waveform generation signal in accordance
6 with the timing control data;

7 c) generating a transfer signal in accordance with the timing control
8 data;

9 d) transferring the ejection data to a register in accordance with the
10 transfer signal;

11 e) generating a drive waveform in accordance with the
12 drive-waveform generation signal; and

13 f) controlling, based on the drive waveform generated in step d)
14 and the ejection data stored in the register, an inkjet head to selectively
15 eject ink droplets from multiple nozzles of the inkjet head onto target
16 pixels on a medium, wherein:

17 the timing control data are defined for each of a plurality of lines
18 defined on the medium, each of the plurality of lines extending in a first
19 direction that is orthogonal to a second direction in which the medium is
20 conveyed relative to the inkjet head, the plurality of lines having an
21 interval in the second direction that is smaller than a minimum ejection
22 frequency of each of the multiple nozzles;

23 the drive waveform is only generated in step e) at lines which
24 include at least one of the target pixels; and

25 the ejection data is transferred in step d) only at lines which include
26 at least one of the target pixels and at which the ink droplets are ejected
27 based on ejection data different from previously transferred ejection data.

1 9 (Currently Amended). The control method according to claim 6, further
2 comprising the steps of:

3 g h) generating a data-rotation instructing signal in accordance with

4 the timing control data, and
5 h i) rotating ejection data between the register and a storage register
6 in accordance with the data-rotation instructing signal.

1 10 (Currently Amended). ~~The~~ An inkjet device according to claim 2
2 comprising:

3 an inkjet head having multiple nozzles arranged at equally spaced
4 intervals in a row, the inkjet head ejecting ink droplets from the multiple
5 nozzles onto target pixels on a medium;

6 a data generating unit that generates both ejection data and timing
7 control data from pattern data;

8 a drive-waveform-generation-signal generating unit that generates a
9 drive-waveform generation signal in accordance with the timing control
10 data;

11 a transfer-signal generating unit that generates a transfer signal in
12 accordance with the timing control data;

13 a drive-waveform generating unit that generates a drive waveform
14 in accordance with the drive-waveform generation signal;

15 an ejection-data transferring unit that transfers the ejection data in
16 accordance with the transfer signal;

17 a control unit that controls, based on the drive waveform and the
18 ejection data transferred from the ejection-data transferring unit, the inkjet
19 head to selectively eject ink droplets from the multiple nozzles; and

20 a conveying unit that conveys the medium in a first direction
21 relative to the inkjet head, wherein:

22 a plurality of lines are defined on the medium, each of the plurality
23 of lines extending in a second direction that is orthogonal to the first
24 direction;

25 the plurality of lines has an interval in the first direction that is
26 smaller than a minimum ejection frequency of each of the multiple
27 nozzles; and

28 the timing control data are defined for each of the plurality of lines,

29 and include drive-waveform generation timing data, which determine
30 whether to generate the drive waveform for the each of the plurality of
31 lines, and ejection-data transfer timing data, which determine whether to
32 transfer the ejection data for each of the plurality of lines,
33 wherein each of the drive-waveform generation timing data is a bit
34 signal that selectively takes either a first logical value or a second logical
35 value, such that a waveform is generated when the drive-waveform
36 generation timing data has the second logical value;
37 wherein each of the ejection-data transfer timing data is a bit signal
38 that selectively takes either a first logical value or a second logical value,
39 such that a data transfer is requested when the ejection-data transfer timing
40 data has the first logical value, and that a data transfer is not requested
41 when the ejection-data transfer timing data has the second logical value;
42 wherein the drive-waveform generation timing data takes the first
43 logical value only at lines where at least one of the plurality of nozzles
44 ejects ink droplets; and
45 wherein the ejection-data transfer timing data takes the first logical
46 value only at lines where the drive-waveform generation timing data has
47 the first logical value and also ink droplets are ejected using ejection data
48 different from ejection data which are previously transferred.